

REMARKS / DISCUSSION OF ISSUES

The present amendment is submitted in response to the Office Action mailed June 10, 2009, Claims 1-9 remain in this application. Claims 1, 7 and 8 have been amended. In view of the remarks to follow, reconsideration and allowance of this application are respectfully requested.

35 U.S.C. §112, second paragraph

Claims 7 and 8 stand rejected under 35 U.S.C. §112, second paragraph as being allegedly indefinite for including variables that are not defined in the claim itself. Applicant has amended claims 7 and 8 to define the undefined variables. Applicant requests reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Claim Rejections under 35 USC 102

In the Office Action, Claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application No. 2001/0050970 (“Haar”). Applicant respectfully traverses the rejection.

Claim 1 is allowable

Independent Claim 1 has been amended herein to better define Applicant’s invention over Haar. Claim 1 now recites limitations and/or features which are not disclosed by Haar. Accordingly, the cited portions of Haar do not anticipate claim 1, because the cited portions of Haar fail to disclose every element of claim 1. For example, the cited portions of Haar fail to disclose or suggest, “*a detector with detector elements which lie outside the region permeated by primary radiation and whose effective dimensions become increasingly smaller in the direction of decreasing scattering angles*”, as recited in claim 1 (Emphasis Added). Instead, the cited portions of Haar disclose detector elements (figs. 2-8, b2-b10) which lie outside the region permeated by primary radiation whose effective dimensions are selected such that ***a channel occupancy combination selected from the following group can be realized:*** [20xb1 or 20xb2 or 16xb4], [16xb1 or 16xb2 or 12xb4], [8xb1 or 8xb2 or 8xb4 or 8xb6], [4xb1 or 4xb2 or 4xb4, 4xb8, 4xb12], [8xb1 or 8xb2 or 8xb5], [4xb1, 4xb2, 4xb4, 4xb10], wherein the detector elements are designated b1 . . . b10. See Haar, par. [0009]. Haar

illustrates, for example in Fig. 2, twenty first detector elements b1 each having a first width B1 provided in a symmetrical arrangement with B1 being the minimum width. There is also shown five second detector elements b2 with the width B2 in a symmetrical arrangement at both sides of the first detector elements b1. The width B2 is twice as wide as the width B1. There is also shown four fourth detector elements b4 adjoining at each of the sides of the detector elements b2, the fourth width B4 thereof corresponding to four times the first width B1. The proposed structuring has 64 times the first width B1. This allows the following slice combinations to be activated: 20xb1, 20xb2, 16xb4. It is respectfully submitted that the detector arrangements shown in Figs. 2-8 of Haar do not constitute *detector elements* *whose effective dimensions become increasingly smaller in the direction of decreasing scattering angles*".

Haar does not teach the afore-mentioned element of claim 1 because the channel occupancy combination scheme taught in Haar solves a different problem in a different manner than Applicants' invention. It is a primary objective of Haar to minimize the number of septa with respect to the selected channel occupancy combination to enhance the efficiency, and in particular the quantum efficiency of the detector. This removes the need for a diaphragm preceding the detector and reduces the costs. In contrast to Haar, it is an objective of the present invention to keep the resolution of the momentum transfer (A quantity characterizing the scattered radiation) constant over the entire detector or below a maximum value. If the resolution of the momentum transfer is to be kept constant over the entire detector or is to be kept below a maximum value, the effective dimensions of the detector elements must lie below a value which is dependent on the scattering angle and which becomes smaller in the direction in which the scattering angles become smaller. This is achieved by the invention by **making the effective dimensions of the detector elements increasingly smaller in the direction of smaller scattering angles.**

Moreover, the symmetrical arrangement of the different detector elements of Haar teaches away from detector elements having effective dimensions that become increasingly smaller in the direction of decreasing scattering angle. For example, in Fig. 5, the detector elements are arranged as b6, b2, b4, b2, b1, b2, b4, b6. This arrangement fails to anticipate

claim 1 for at least two reasons. First, dimension b2 is smaller than b6 and b4, yet b2 is positioned between b6 and b4. This is clearly in violation of an effective dimension that becomes increasingly smaller in the direction of decreasing scattering angle. Secondly, the dimension widths are symmetrically arranged with b1 at the center, surrounded by b2, surrounded in turn by b4, and finally surrounded in turn by b6. Similar arrangements are shown in each of the other figures. It is respectfully submitted that any symmetrical arrangement is different from an arrangement in which the detector elements have effective dimensions that become increasingly smaller in the direction of increasing scattering angles. Hence, claim 1 is allowable.

Rejection under 35 U.S.C. §103(a)

Claims 2-4, 6 and 9 are allowable

The Office has rejected claims 2-4, 6 and 9 under 35 U.S.C. §103(a) as being unpatentable over Haar in view of U.S. Patent No. 4,956,856 (“Harding”). Applicant respectfully traverses the rejections.

As explained above, the cited portions of Haar do not disclose or suggest each and every element of claim 1 from which claims 2-4, 6 and 9 depend. Harding does not disclose each of the elements of claim 1 that are not disclosed by Haar. For example, the cited portions of Harding fails to disclose or suggest, “*a detector with detector elements which lie outside the region permeated by primary radiation and whose effective dimensions become increasingly smaller in the direction of decreasing scattering angles*”, as recited in claim 1 (Emphasis Added). Harding is merely cited for teaching certain claim limitations associated with claims 2-4, 6 and 9.

Thus, the cited portions of Haar and Harding, individually or in combination, do not disclose or suggest “*a detector with detector elements which lie outside the region permeated by primary radiation and whose effective dimensions become increasingly smaller in the direction of decreasing scattering angles*”, as recited in claim 1 (Emphasis Added). Hence

claim 1 is allowable and claims 2-4, 6 and 9 are allowable, at least by virtue of their respective dependence from claim 1.

Claim 5 is allowable

The Office has rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Haar in view of U.S. Patent No. 6,470,067 (“Harding (067’’’)). Applicant respectfully traverses the rejection.

As explained above, the cited portions of Haar do not disclose or suggest each and every element of claim 1 from which claim 5 depends. Harding (067’) does not disclose each of the elements of claim 1 that are not disclosed by Haar. For example, the cited portions of Harding (‘067) fails to disclose or suggest, “*a detector with detector elements which lie outside the region permeated by primary radiation and whose effective dimensions become increasingly smaller in the direction of decreasing scattering angles*”, as recited in claim 1 (Emphasis Added).

Thus, the cited portions of Haar and Harding (‘067), individually or in combination, do not disclose or suggest “*a detector with detector elements which lie outside the region permeated by primary radiation and whose effective dimensions become increasingly smaller in the direction of decreasing scattering angles*”, as recited in claim 1 (Emphasis Added). Hence claim 1 is allowable and claim 5 is allowable, at least by virtue of its respective dependence from claim 1.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-9 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-945-6000.

Respectfully submitted,



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